ADSORPTION OF IRON ON MESOPOROUS MATERIAL

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ABSTRACT

ADSORPTION OF IRON ON MESOPOROUS MATERIAL

Mesoporous material MCM-41 was synthesized in acid condition under ambient temperature from Tetraorthosilicate (TEOS) as Si source and Cetyltrimethyammoniumbromide (CTABr) as template. This product was characterized by powder X-ray diffraction method (XRD) and Infrared Spectrum analysis (FT-IR). In order to study the effect of iron adsorption capacity, the percentage of adsorption must be calculate by using the data from Atomic Absorption Spectroscopy (AAS). The adsorption study was carried out under few parameters which are concentration of iron, contact time and pH. The results showed that the optimum condition for iron to be adsorbed by MCM-41 is at 15 ppm in 30 minutes at pH 2.